



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
SOLID WASTE AND EMERGENCY
RESPONSE

September 8, 2004

MEMORANDUM

SUBJECT: National Remedy Review Board Recommendations for the Silver Bow Creek/Butte Priority Soils Superfund Site

FROM: Jo Ann Griffith, Chair
National Remedy Review Board

A handwritten signature in black ink, appearing to read "Jo Ann Griffith", is written over the "FROM:" line.

TO: Max H. Dodson
Assistant Regional Administrator

Purpose:

The National Remedy Review Board (NRRB) has completed its review of the proposed cleanup action for the Silver Bow Creek/Butte Priority Soils Superfund Site in Butte, Montana. This memorandum documents the NRRB's advisory recommendations.

Context for NRRB Review:

The Administrator announced the NRRB as one of the October 1995 Superfund Administrative Reforms to help control response costs and promote consistent and cost-effective decisions. The NRRB furthers these goals by providing a cross-regional, management-level, "real time" review of high cost proposed response actions prior to their being issued for public comment. The Board reviews all proposed cleanup actions that exceed its cost-based review criteria.

The NRRB evaluates the proposed actions for consistency with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) and relevant Superfund policy and guidance. It focuses on the nature and complexity of the site; health and environmental risks; the range of alternatives that address site risks; the quality and reasonableness of the cost estimates

for alternatives; regional, state/tribal, and other stakeholder opinions on the proposed actions, and any other relevant factors.

Generally, the NRRB makes advisory recommendations to the appropriate regional decision maker. The Region will then include these recommendations in the administrative record for the site, typically before it issues the proposed cleanup plan for public comment. While the Region is expected to give the Board's recommendations substantial weight, other important factors, such as subsequent public comment or technical analyses of response options, may influence the final regional decision. The Board expects the regional decision maker to respond in writing to its recommendations within a reasonable period of time, noting in particular how the recommendations influenced the proposed cleanup decision, including any effect on the estimated cost of the action. It is important to remember that the NRRB does not change the Agency's current delegations or alter in any way the public's role in site decisions.

Overview of the Proposed Action:

The Silver Bow Creek/Butte Area Superfund Site is located in southwest Montana and is broken up into eight remedial operable units. This action addresses the Butte Priority Soils Operable Unit which is located in Butte and Walkerville, Montana at the headwaters of the Clark Fork Basin. The Butte Priority Soils Operable Unit encompasses five square miles and includes a large part of the Butte urban area. More than 100 years of hard rock mining, smelting, milling and ore processing operations have left high volumes of mostly low toxicity waste containing heavy metals and arsenic throughout the operable unit. The contaminants are found in residential yard soils, in the interior (attics) of homes, in non-residential surface and buried soils and wastes, and in surface and ground water. The widespread distribution of contaminants has made it impossible to perform a total removal of all contamination. Generally, EPA Region 8's preferred remedy includes the removal or capping of waste source areas; a multi-pathway approach to address contaminated residential yards and indoor dust; sediment removal from Silver Bow Creek; a stormwater management program including best management practices (BMPs) and waste source removal to address contaminated surface water; a ground water collection and treatment system to address contaminated ground water; an extensive site-wide monitoring program; and appropriate institutional controls.

NRRB Advisory Recommendations:

The NRRB reviewed the information package describing this proposal and discussed related issues with Ron Bertram, Sara Sparks, Susan Griffin, Bob Fox, and Henry Elsen from Region 8 and Joe Griffin and Sandi Olsen from the State of Montana Department of Environmental Quality. Based on this review and discussion, the Board offers the following comments:

1. EPA policy as expressed in the Superfund Lead-Contaminated Residential Sites Handbook (OSWER Directive 9285.7-50) calls for a cleanup of yard soils that pose an

unacceptable risk to residents. It also states that attic dust from mining sources should be addressed only if it might be a continued source of contamination to living areas. Exterior lead paint can be addressed to protect residential soil cleanups. The guidance generally excludes cleanup by EPA of interior lead paint, plumbing pipes and solder. The multi-pathway cleanup approach proposed by the Region addresses the public health problems holistically, but the decision documents should clarify which lead, arsenic, and mercury responses are addressed by Superfund and which are being voluntarily undertaken by other parties.

2. The Board was unclear how cleanup levels were derived for arsenic and lead from the summary of the risk assessment provided in the package. At the meeting, the Region presented additional explanatory information regarding the basis for the selected cleanup levels. The Board recommends that the decision documents include this additional information and clearly describe the particular site circumstances leading to the development of cleanup levels for arsenic and lead.
3. The information submitted to the Board did not include remedial goals for sediment, although the Region's preferred alternative does include a sediment excavation component from certain reaches of Silver Bow Creek to mitigate potential adverse impacts to surface water quality. The decision documents should clearly define the sediment remediation goals and delineate areas and volumes of sediment to be addressed via the preferred remedy.
4. The Board supports the Region's preferred Best Management Practices strategy for addressing surface water/storm water quality issues in the study area. The phased diagnostic and compliance approach will likely require an iterative approach to achieve established surface water goals. The information package presented to the Board indicated that baseline surface water monitoring would occur for three years after the Consent Decree was finalized, although the Region indicated at the meeting that baseline monitoring was underway. The Board would like to reiterate the importance of establishing the baseline conditions in Silver Bow Creek water quality early in the process and encourages the Region to continue these efforts concurrently with EPA's remedy selection process and the Consent Decree negotiations, so that remediation, including any early actions, can proceed as soon as possible.
5. The package as presented to the Board did not describe a clear plan for completing the residential soil cleanup. The Board recommends that current multi-pathway practices be expanded to include a mechanism by which all the properties would be sampled and those exceeding cleanup levels for soils be remediated within an appropriate time frame.
6. The Board notes that the package did not contain much information on; 1) the types of institutional controls (ICs) that would be used to ensure the remedy's protectiveness, 2) how those ICs would be put in place, or 3) who would enforce the ICs and through which

legal mechanisms. The Board recommends that the decision documents include detailed information regarding these issues for both the existing and future ICs.

7. The package presented to the Board seemed to describe all mining waste as principal threat waste regardless of the concentration, risks, or threats posed to human health or the environment. The Board recommends that the Region reconsider its definition of the site waste as principle threat waste when preparing its decision documents. The document entitled “A Guide to Principal Threat and Low-Level Threat Wastes (OSWER Directive 9380.3-06FS), provided guidance on making that determination. Defining wastes as either low level or principal threat are critical because the NCP lays out an expectation for treatment of principal threat waste and containing low-level threat waste. Lead contamination found at the levels described in the Board package generally is not considered a principal threat and generally not subject to the NCP’s preference for treatment.
8. Based on the presentation by the Region and State representatives, there appears to be some uncertainty regarding the hydrogeology of the alluvial aquifer, as well as uncertainty regarding prospects for its restoration to beneficial use and whether the MCLs or other ARARs can be achieved in a reasonable time frame. The Board recognizes that there will be further review of the existing hydrogeological data by ORD’s Ground Water Technical Support Center. The Board recommends that following the review, the Region consider two scenarios:
 - Whether and how site data support the elements of an ARARs waiver based on technical impracticability of achieving MCLs in any or all parts of the alluvial aquifer, as described in OSWER Directive 9234.2-25, “Guidance for Evaluating Technical Impracticability of Ground Water Restoration,” and
 - Whether there is potential for redirecting additional ground water flow to the Berkeley Pit, or other ground water management strategies that would increase the probability that part of the alluvial aquifer could meet MCLs within a reasonable time frame.

If the further review indicates that MCLs cannot be achieved for ground water within a reasonable time frame, and/or the effects on surface water are manageable, based on information presented to date, the Board supports the proposal to leave source materials (for example, Parrot Tailings and Northside Tailings Areas) in place.

9. The package included the remedial action objective (RAO), “Return contaminated ground water to its beneficial use whenever practicable and within a reasonable time frame given the circumstances at the site.” Depending upon the outcome of the review described in Comment # 8, this specific RAO may or may not be appropriate. If further review supports the use of a TI waiver, then this particular RAO should not be included in the

decision documents. In that case, the Region should develop a more realistic objective that might instead focus on, for example, limiting use or minimizing migration. Also, the RAO's referencing "remediated solid media" are unclear. The Region should review the proposed RAO's included in the package, clarify those referencing solid media, and only include those RAO's that are necessary and achievable in the decision documents.

The NRRB appreciates the Region's efforts in working together with the affected stakeholders at this site. We encourage you to include your draft response to these findings with the draft Proposed Plan when it comes into your OSRTI Regional Support Branch for review. The Regional Support Branch will work with both myself and your staff to resolve any remaining issues prior to your release of the Proposed Plan. Once your response is final and made part of the site's Administrative Record, then a copy of this letter and your response will be posted on the NRRB website. We will work with your regional NRRB representative on the timing of the release.

Thank you for your support and the support of your managers and staff in preparing for this review. Please call me at (703) 603-8774 should you have any questions.

cc: M. Cook (OSRTI)
E. Southerland (OSRTI)
Susan Bromm, OSRE
David Lopez, OSRTI
NRRB Members